

REMARKS

Claims 1-12 and 14-24 are rejected, and claim 13 is objected to as being allowable if rewritten in independent form.

In response to the objection, claim 1, line 9 has been amended to recite “passing an electric current through the electrolytic solution to form [[a]] the semiconductor layer on the impregnated electric conductor.” Thus, it is clear that this passage refers to the semiconductor layer first introduced at line 3.

Entry of the amendment (as not giving rise to any issues requiring any further search and/or consideration) and withdrawal of the objection is respectfully requested.

Claims 1-12, 14-21, 23 and 24 were rejected under 35 U.S.C. § 102(c) as being anticipated by US 2003/013256 A1 to Yoshida et al. Yoshida et al was cited as disclosing the method substantially as claimed, including the step of “impregnating the pores of the electric conductor with a semiconductor layer-forming precursor before energization *to render the concentration of semiconductor layer-forming precursor in the pores higher than that of semiconductor layer-forming precursor in the electrolytic solution,*” citing paragraph [0060]. As to claim 2, the electrolytic solution (phosphoric acid) of paragraph [0060] was cited as disclosing use of an electrolytic solution not containing a semiconductor layer.

The rejection should be withdrawn because (i) Yoshida et al does not disclose making the concentration of the semiconductor layer-forming precursor in the pores higher than that of the semiconductor layer-forming precursor in the electrolytic solution; (ii) the semiconductor layer-forming solution disclosed at paragraph [0060] of Yoshida et al is not an electrolytic solution; and (iii) Yoshida et al also does not disclose forming the semiconductor layer on the electric conductor (anode conductor) by energization as required by present claim 1.

In more detail, as described in paragraphs [0059] and [0060] of Yoshida et al, a capacitor was prepared by forming an anode conductor having micro-pores and including a tantalum oxide film serving as a dielectric layer; forming a solid electrolyte thereon by chemical oxidated polymerization of poly-3,4-ethylenedioxothiophene in a polymerization solution containing 3,4-ethylenedioxothiophene (which procedure was repeated three times); and reforming in a solution of phosphoric acid at a reformation voltage of 18 V to repair the dielectric layer.

Contrary to the Examiner's suggestion, there is nothing in the cited passages which discloses impregnating the pores of the electric conductor with a semiconductor layer-forming precursor before energization, to render the concentration of semiconductor layer-forming precursor in the pores higher than that of the semiconductor layer-forming precursor in the electrolytic solution. The corresponding semiconductor layer-forming solution in paragraph [0060] of Yoshida et al is the polymerization solution containing 3,4-ethylenedioxothiophene. Therefore is no disclosure of making the concentration of the semiconductor layer-forming precursor in the pores higher than that of the semiconductor layer-forming precursor in the electrolytic solution, for example, by using an electrolytic solution not containing a semiconductor layer-forming precursor as claimed in claim 2. Moreover, the semiconductor layer-forming solution disclosed at paragraph [0060] of Yoshida et al is not an electrolytic solution, but rather is a polymerization solution for carrying out chemical oxidated polymerization. Regarding this last point, paragraph [0060] of Yoshida et al also does not disclose forming the semiconductor layer on the electric conductor (anode conductor) by energization as required by present claim 1.

Applicants further comment as follows.

Although not pointed out by the Examiner, a capacitor was prepared by performing electrolytic oxidative polymerization after chemical oxidative polymerization as described in paragraph [0060] to [0062] of Yoshida et al. A semiconductor layer-forming precursor does not exist in the pores of the conductors before they are dipped into the polymerization solution for electrolytic oxidative polymerization. Although the polymerization solution may enter the pores by dipping the conductors into the solution, the concentration of the semiconductor layer-forming precursor should be the same or lower than that of the polymerization solution for electrolytic oxidative polymerization. Yoshida et al further differs from the claimed method in this respect which requires impregnating the pores before energization to render the concentration of semiconductor layer-forming precursor in the pores higher than that of the semiconductor layer-forming precursor in the electrolytic solution.

Because Yoshida et al does not meet each of the limitations of the claimed method, the present claims are not anticipated and define novel subject matter, and withdrawal of the foregoing rejection under 35 U.S.C. § 102(e) is respectfully requested.

Claim 22 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Yoshida et al.

Applicants rely on the response above with respect to the rejection of claims 1-12, 14-21, 23 and 24 over Yoshida et al. As shown above, Yoshida et al does not meet each of the characteristic features (i) to (iii) of the method of the present invention as claimed.

Withdrawal of all rejections and allowance of claims 1-24 is earnestly solicited.

In the event that the Examiner believes that it may be helpful to advance the prosecution of this application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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